



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/806,120

03/23/2004

Tetsuo Yamada

107317-00063

2119

7590 07/27/2007
ARENT FOX KINTNER PLOTKIN & KAHN, PLLC
Suite 400
1050 Connecticut Avenue, N.W.
Washington, DC 20036-5339

EXAMINER

MISLEH, JUSTIN P

ART UNIT

PAPER NUMBER

2622

MAIL DATE

DELIVERY MODE

07/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/806,120

Applicant(s)

YAMADA, TETSUO

Examiner

Justin P. Misleh

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 14 is/are pending in the application.
- 4a) Of the above claim(s) 2 - 5 and 7 - 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/23/04 and 5/21/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of **Species I (Claims 1 and 6)** in the reply filed on July 9, 2007 is acknowledged.
2. **Claims 2 – 5 and 7 – 14** are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on July 9, 2007.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

4. The information disclosure statements (IDS) submitted on March 23, 2004 and May 21, 2007 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the Examiner is considering the information disclosure statements.

Specification

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.
The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed

Art Unit: 2622

150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. **The form and legal phraseology often used in patent claims, such as “means” and “said,” should be avoided.** The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, “The disclosure concerns,” “The disclosure defined by this invention,” “The disclosure describes,” etc.

More specifically, the abstract (line 1) recites, “comprises”, which the Examiner considers to be legal phraseology as described above. **Appropriate correction is required.**

6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

7. The drawings are objected to because minor typographical error.

Figure 1E appears to be have labeled “FIGURE 1D”. In other words, there are two figures labeled as “FIGURE 1D”. The second instance of “FIGURE 1D” appears to have been the result of a minor typographical error.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

Art Unit: 2622

should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the Examiner does not accept the changes, the Applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

8. **Claims 1 and 6** are objected to because of the following informalities: lack of clarity and precision.

For **Claims 1 and 6**, the claims each recite therein, “one of the adjoining vertical transfer devices”; however, no adjoining vertical transfer devices have been previously recited – thereby presenting a lack of clarity and precision. For the purposes of clarity and precision, the Examiner recommends changing the recitation to “one of an adjoining vertical transfer device of the plurality of vertical charge transfer devices”. **Appropriate correction is required.**

For **Claim 6**, the claim recites therein, “a plurality of vertical charge transfer device”. For the purposes of clarity, “device” should be changed to “devices”. **Appropriate correction is required.**

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. **Claims 1 and 6** are rejected under 35 U.S.C. 102(b) as being anticipated by Elabd et al. (US 5,196,939).

11. For **Claim 1** (please see claim objection above), Elabd et al. disclose, as shown in figures 4 and 6A, an electric charge transfer apparatus (31), comprising:

a plurality of vertical charge transfer devices (e.g., 15A, 15B, and 15C), each of which transfers a signal electric charge (see figure 4 and column 4, lines 28 – 61);

a plurality of charge-discharging circuits (e.g., collectively dump drain 35) formed next to each vertical transfer device (e.g., pixel 40A, vertical transfer 15A, dump gate 55, and dump drain 35), each charge-discharging circuit discharging the signal electric charge (see column 5, lines 17 – 22) transferred by at least either one of an adjoining vertical transfer device of the plurality of vertical charge transfer device (see column 5, line 14 – column 6, line 16); and

an output circuit (transfer registers 17A and 17B) that outputs the signal electric charge transferred by the vertical charge transfer devices to an outside (see column 4, lines 42 – 61) of the electric charge transfer apparatus (31).

12. For **Claim 6** (please see claim objection above), Elabd et al. disclose, as shown in figures 4 and 6A, a solid-state imaging device (31), comprising:

a semiconductor substrate (see figure 6 and column 5, lines 14 – 19);

a plurality of photoelectric conversion elements (e.g., 40A, 40B, and 40C) formed on said semiconductor substrate (see figure 6 and column 5, lines 14 – 19);

a plurality of vertical charge transfer devices (e.g., 15A, 15B, and 15C) formed above said semiconductor substrate (see figure 6 and column 5, lines 14 – 19), which transfer signal electric charge photoelectric converted by said photoelectric conversion elements (see figure 4 and column 4, lines 28 – 61);

a plurality of charge-discharging circuits (e.g., collectively dump drain 35) formed next to each vertical transfer device (e.g., pixel 40A, vertical transfer 15A, dump gate 55, and dump drain 35), each charge-discharging circuit discharging the signal electric charge (see column 5, lines 17 – 22) converted by the photoelectric conversion element at a predetermined position (e.g., pixel 40A, vertical transfer 15A, dump gate 55, and dump drain 35) and transferred by at least either one of an adjoining vertical transfer device of the plurality of vertical charge transfer device (see column 5, line 14 – column 6, line 16); and

an output circuit (transfer registers 17A and 17B) that outputs the signal electric charge transferred by the vertical charge transfer devices to outside (see column 4, lines 42 – 61).

Conclusion

13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

Art Unit: 2622

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Lin Ye can be reached on 571.272.7372. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Justin Misleh
Examiner, GAU 2622
July 20, 2007